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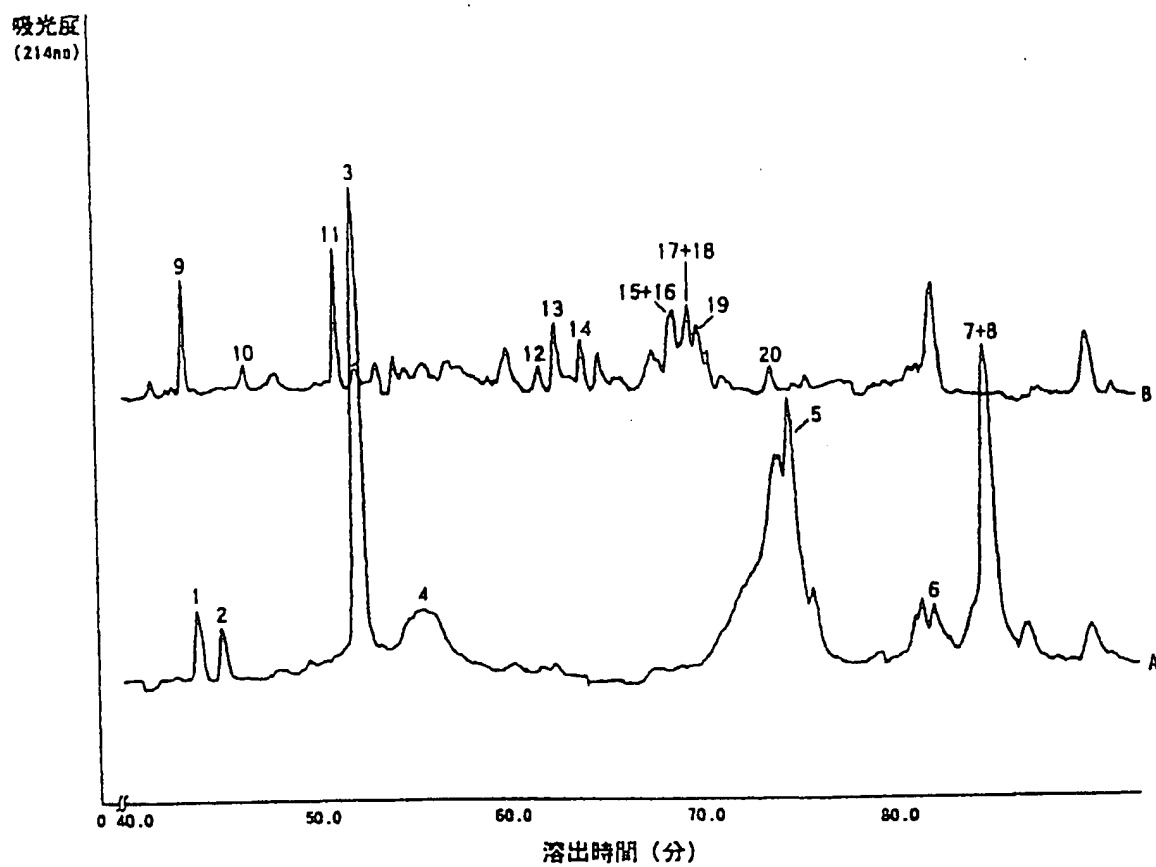
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(51) 国際特許分類6 C07K 14/54, C12P 21/02, C12N 15/24, A61K 38/20	A1	(11) 国際公開番号 WO00/12555
		(43) 国際公開日 2000年3月9日(09.03.00)
(21) 国際出願番号 PCT/JP98/05186 (22) 国際出願日 1998年11月18日(18.11.98) (30) 優先権データ 特願平10/247588 1998年9月1日(01.09.98) JP 特願平10/327914 1998年11月18日(18.11.98) JP	(81) 指定国 BR, CA, KR, US, 欧州特許(AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE)	添付公開書類 国際調査報告書
(71) 出願人(米国を除くすべての指定国について) 株式会社 林原生物化学研究所 (KABUSHIKI KAISHA HAYASHIBARA SEIBUTSU KAGAKU KENKYUJO)[JP/JP] 〒700-0907 岡山県岡山市下石井1丁目2番3号 Okayama, (JP) (72) 発明者; および (75) 発明者/出願人(米国についてのみ) 鳥越角二(TORIGOE, Kakuji)[JP/JP] 〒710-0133 岡山県倉敷市藤戸町藤戸1343番地の5 Okayama, (JP) 谷合まどか(TANIAI, Madoka)[JP/JP] 〒700-0802 岡山県岡山市三野2丁目12番44号 Okayama, (JP) 栗本雅司(KURIMOTO, Masashi)[JP/JP] 〒700-0011 岡山県岡山市学南町2丁目7番25号 Okayama, (JP)		COPY
(54) Title: INTERLEUKIN 18-BINDING PROTEIN (54) 発明の名称 インターロイキン-18結合蛋白質		
(57) Abstract A protein containing a specific amino acid sequence which binds to IL-18 and thus regulates the physiological actions thereof; a DNA encoding this protein; and IL-18 regulators and drugs for sensitivity diseases containing the above IL-18-binding protein as the active ingredient.		

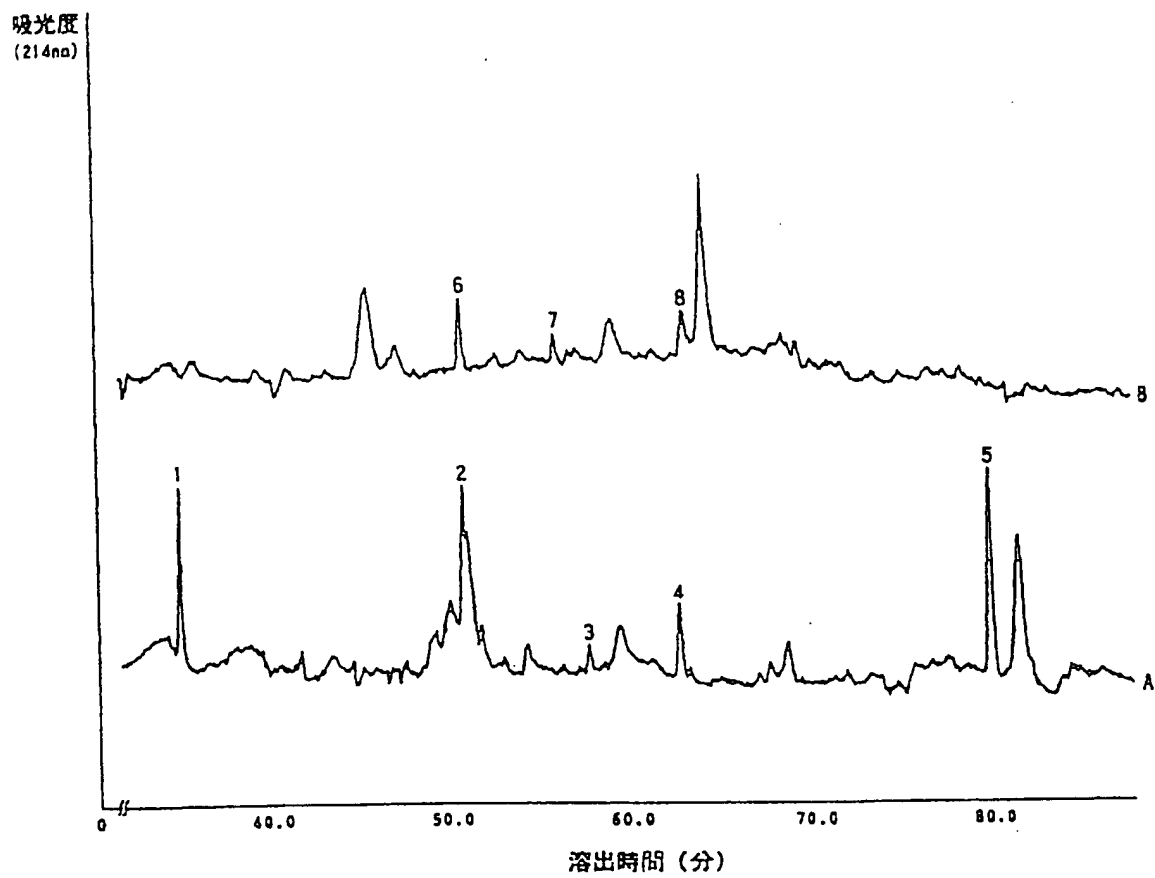
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第 1 図



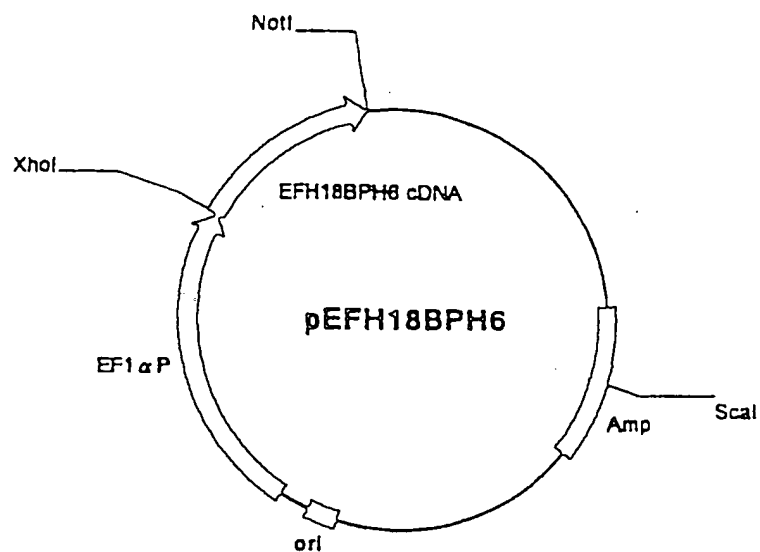
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第 2 図

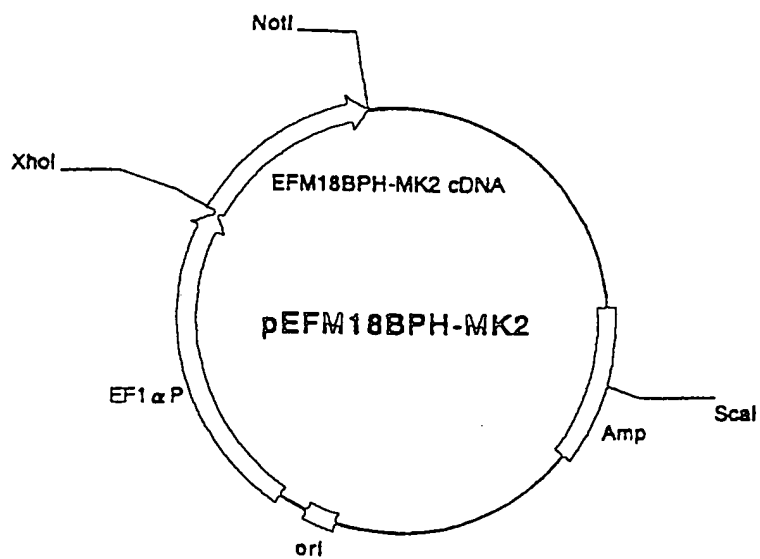


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第3図



第4図



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<141> 1998-11-18

<150> JP 247,588/98

<151> 1998-09-01

<150> JP 327,914/98

<151> 1998-11-18

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35 40 45

Asn Gly Thr Leu Ser Leu Ser Cys Val Ala Cys Ser Arg Phe Pro Asn
50 55 60

Phe Ser Ile Leu Tyr Trp Leu Gly Asn Gly Ser Phe Ile Glu His Leu
65 70 75 80

Pro Gly Arg Leu Trp Glu Gly Ser Thr Ser Arg Glu Arg Gly Ser Thr
85 90 95

Gly Thr Gln Leu Cys Lys Ala Leu Val Leu Glu Gln Leu Thr Pro Ala

100 105 110
 Leu His Ser Thr Asn Phe Ser Cys Val Leu Val Asp Pro Glu Gln Val
 115 120 125
 Val Gln Arg His Val Val Leu Ala Gln Leu Trp Ala Gly Leu Arg Ala
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 35 40 45
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 Leu Tyr Trp Leu Gly Asn Gly Ser Phe Ile Glu His Leu Pro Gly Arg
 65 70 75 80
 Leu Lys Glu Gly His Thr Ser Arg Glu His Arg Asn Thr Ser Thr Trp
 85 90 95
 Leu His Arg Ala Leu Val Leu Glu Glu Leu Ser Pro Thr Leu Arg Ser
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 His Ile Ile Leu Ala Gln Leu Trp Asp Gly Leu Lys Thr Ala Pro Ser
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Xaa Xaa Gln Glu Ala Leu Pro

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Leu Val Asp Pro Glu Gln

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<212> PRT

<213> Homo sapiens

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His Val Val Leu

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<210> 16

<211> 7

<212> PRT

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Glu Gln Leu Thr Pro Ala Leu

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Ile Glu His Leu Pro Gly Arg Leu

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1 5

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His Ile Ile Leu

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Gln Cys Pro Ala Leu Glu Val Thr Trp Pro Glu Val Glu Val Pro Leu	
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Asn Gly Thr Leu Ser Leu Ser Cys Val Ala Cys Ser Arg Phe Pro Asn	
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Pro Gly Arg Leu Trp Glu Gly Ser Thr Ser Arg Glu Arg Gly Ser Thr	
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ggt acg cag ctg tgc aag gcc ttg gtg ctg gag cag ctg acc cct gcc	336
Gly Thr Gln Leu Cys Lys Ala Leu Val Leu Glu Gln Leu Thr Pro Ala	
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ctg cac agc acc aac ttc tcc tgt gtg ctc gtg gac cct gaa cag gtt	384
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Val Gln Arg His Val Val Leu Ala Gln Leu Trp Ala Gly Leu Arg Ala	
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25

30

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Leu Thr Leu Ser Cys Thr Ala Cys Ser Arg Phe Pro Tyr Phe Ser Ile

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60

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Leu Tyr Trp Leu Gly Asn Gly Ser Phe Ile Glu His Leu Pro Gly Arg

65

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75

80

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Leu Lys Glu Gly His Thr Ser Arg Glu His Arg Asn Thr Ser Thr Trp

	85	90	95	
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Leu His Arg Ala Leu Val Leu Glu Glu Leu Ser Pro Thr Leu Arg Ser				
	100	105	110	
acc aac ttc tcc tgt ttg ttt gtg gat cct gga caa gtg gcc cag tat				384
Thr Asn Phe Ser Cys Leu Phe Val Asp Pro Gly Gln Val Ala Gln Tyr				
	115	120	125	
cac atc att ctg gcc cag ctc tgg gat ggg ttg aag aca gct ccg tcc				432
His Ile Ile Leu Ala Gln Leu Trp Asp Gly Leu Lys Thr Ala Pro Ser				
	130	135	140	
cct tct caa gaa acc ctc tct agc cac agc cca gta tcc aga tca gca				480
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aca aag gac ccc tgc ccc tcc cag ccc cca gtg ttc cca gca gct aag				96
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 35 40 45

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 Asn Gly Thr Leu Ser Leu Ser Cys Val Ala Cys Ser Arg Phe Pro Asn
 50 55 60

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 Phe Ser Ile Leu Tyr Trp Leu Gly Asn Gly Ser Phe Ile Glu His Leu
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 Pro Gly Arg Leu Trp Glu Gly Ser Thr Ser Arg Glu Arg Gly Ser Thr
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 Gly Thr Gln Leu Cys Lys Ala Leu Val Leu Glu Gln Leu Thr Pro Ala
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ctg cac agc acc aac ttc tcc tgt gtg ctc gtg gac cct gaa cag gtt 384
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Met Thr Met Arg His Asn Trp Thr Pro Asp Leu Ser Pro Leu

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Trp Val Leu Leu Leu Cys Ala His Val Val Thr Leu Leu Val Arg Ala

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aca cct gtc tcg cag acc acc aca gct gcc act gcc tca gtt aga agc 207

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aca aag gac

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Thr Lys Asp

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gtc ctg gcc cag ctc tgg gct ggg ctg agg gca acc ttg ccc ccc acc 96

Val Leu Ala Gln Leu Trp Ala Gly Leu Arg Ala Thr Leu Pro Pro Thr

20 25 30

caa gaa gcc ctg ccc tcc agc cac agc agt cca cag cag cag ggt 141

Gln Glu Ala Leu Pro Ser Ser His Ser Ser Pro Gln Gln Gln Gly

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-25

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Trp Val Leu Leu Leu Cys Ala His Val Val Thr Leu Leu Val Arg Ala

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Gln Cys Pro Ala Leu Glu Val Thr Trp Pro Glu Val Glu Val Pro Leu

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Asn Gly Thr Leu Ser Leu Ser Cys Val Ala Cys Ser Arg Phe Pro Asn

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 Pro Gly Arg Leu Trp Glu Gly Ser Thr Ser Arg Glu Arg Gly Ser Thr
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ggt acg cag ctg tgc aag gcc ttg gtg ctg gag cag ctg acc cct gcc 495
 Gly Thr Gln Leu Cys Lys Ala Leu Val Leu Glu Gln Leu Thr Pro Ala
 100 105 110

ctg cac agc acc aac ttc tcc tgt gtg ctc gtg gac cct gaa cag gtt 543
 Leu His Ser Thr Asn Phe Ser Cys Val Leu Val Asp Pro Glu Gln Val
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 Val Gln Arg His Val Val Leu Ala Gln Leu Trp Ala Gly Leu Arg Ala
 130 135 140

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 Thr Leu Pro Pro Thr Gln Glu Ala Leu Pro Ser Ser His Ser Ser Pro
 145 150 155 160

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Ser Arg Phe Pro Tyr Phe Ser Ile Leu Tyr Trp Leu Gly Asn Gly Ser	
35 40 45	
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Phe Ile Glu His Leu Pro Gly Arg Leu Lys Glu Gly His Thr Ser Arg	
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Glu His Arg Asn Thr Ser Thr Trp Leu His Arg Ala Leu Val Leu Glu	
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Glu Leu Ser Pro Thr Leu Arg Ser Thr Asn Phe Ser Cys Leu Phe Val	
85 90 95	
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Asp Pro Gly Gln Val Ala Gln Tyr His Ile Ile Leu Ala Gln Leu Trp	
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Met Thr Met Arg His Cys Trp Thr

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 His Ser Pro Val Ser Arg Ser Ala Gly Pro Gly Val Ala
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cacagacacc agacttgctt gcaagtcatc atg acc atg aga cac tgc tgg aca 174
 Met Thr Met Arg His Cys Trp Thr

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Tyr Phe Ser Ile Leu Tyr Trp Leu Gly Asn Gly Ser Phe Ile Glu His			
65	70	75	
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Leu Pro Gly Arg Leu Lys Glu Gly His Thr Ser Arg Glu His Arg Asn			
80	85	90	
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Thr Ser Thr Trp Leu His Arg Ala Leu Val Leu Glu Glu Leu Ser Pro			
95	100	105	
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Thr Leu Arg Ser Thr Asn Phe Ser Cys Leu Phe Val Asp Pro Gly Gln			
110	115	120	
gtg gcc cag tat cac atc att ctg gcc cag ctc tgg gat ggg ttg aag			654
Val Ala Gln Tyr His Ile Ile Leu Ala Gln Leu Trp Asp Gly Leu Lys			
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145

150

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Ser Arg Ser Ala Gly Pro Gly Val Ala

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INTERNATIONAL SEARCH REPORT

 International application No.
 PCT/JP98/05186

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl.⁶ C07K14/54, C12P21/02, C12N15/24, A61K38/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl.⁶ C07K14/54, C12P21/02, C12N15/24, A61K38/20

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 SwissProt/PIR/GeneSeq, Genbank/EMBL/DDBJ/GeneSeq, WPI (DIALOG),
 BIOSIS (DIALOG)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Mark D. Adams et al., "Initial assessment of human gene diversity and expression patterns based upon 83 million nucleotides of cDNA sequence", Nature (1995) Vol. 377, No. 6547 suppl. p.3-174	1-9
A	Ushio Shimpei et al, "Cloning of the cDNA for human IFN-gamma-inducing factor, expression in Escherichia coli, and studies on the biologic activities of the protein", Journal of Immunology (1996) Vol. 156, No. 11 p.4274-4279	1-9

☐ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

 "E" earlier document but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

 Date of the actual completion of the international search
 17 February, 1999 (17. 02. 99)

 Date of mailing of the international search report
 2 March, 1999 (02. 03. 99)

 Name and mailing address of the ISA/
 Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

A. 発明の属する分野の分類 (国際特許分類 (IPC))

Int.Cl[°] C 07 K 14/54, C 12 P 21/02, C 12 N 15/24, A 61 K 38/20

B. 調査を行った分野

調査を行った最小限資料 (国際特許分類 (IPC))

Int.Cl[°] C 07 K 14/54, C 12 P 21/02, C 12 N 15/24, A 61 K 38/20

最小限資料以外の資料で調査を行った分野に含まれるもの

国際調査で使用した電子データベース (データベースの名称、調査に使用した用語)

SwissProt/PIR/GeneSeq, Genbank/EMBL/DDBJ/GeneSeq,
WPI(DIALOG), BIOSIS(DIALOG)

C. 関連すると認められる文献

引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
A	Mark D.Adams et al. "Initial assessment of human gene diversity and expression patterns based upon 83 million nucleotides of cDNA sequence", Nature (1995) Vol.377, No.6547 suppl. p.3-174	1-9
A	Ushio Shimpei et al. "Cloning of the cDNA for human IFN-gamma-inducing factor, expression in Escherichia coli, and studies on the biologic activities of the protein", Journal of Immunology (1996) Vol.156, No.11 p.4274-4279	1-9

☐ C欄の続きにも文献が列挙されている。☐ パテントファミリーに関する別紙を参照。

* 引用文献のカテゴリー

「A」 特に関連のある文献ではなく、一般的技術水準を示すもの

「E」 国際出願日前の出願または特許であるが、国際出願日以後に公表されたもの

「L」 優先権主張に疑義を提起する文献又は他の文献の発行日若しくは他の特別な理由を確立するために引用する文献 (理由を付す)

「O」 口頭による開示、使用、展示等に言及する文献

「P」 国際出願日前で、かつ優先権の主張の基礎となる出願

の日の後に公表された文献

「T」 国際出願日又は優先日後に公表された文献であって出願と矛盾するものではなく、発明の原理又は理論の理解のために引用するもの

「X」 特に関連のある文献であって、当該文献のみで発明の新規性又は進歩性がないと考えられるもの

「Y」 特に関連のある文献であって、当該文献と他の1以上の文献との、当業者にとって自明である組合せによって進歩性がないと考えられるもの

「&」 同一パテントファミリー文献

国際調査を完了した日

17.02.99

国際調査報告の発送日

02.03.99

国際調査機関の名称及びあて先

日本国特許庁 (ISA/J P)

郵便番号100-8915

東京都千代田区霞が関三丁目4番3号

特許庁審査官 (権限のある職員)

小暮 道明



4 B

9637

電話番号 03-3581-1101 内線 3449